

CLAIM LISTINGS

Pursuant to 37 CFR §1.121(c), this listing of the claims, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Amend claim 6, and add claims 15 through 20, as follows:

- 1 1. (Previously Presented) A magnesium titanate implant, comprising:
2 an implant body containing titanium or a titanium alloy; and
3 a magnesium titanate oxide film formed on the surface of the said implant body in a single
4 or mixed solution containing magnesium by low voltage dielectric breakdown anodic oxidation.

Claim 2. (Canceled)

- 1 3. (Previously Presented) The magnesium titanate implant as set forth in claim 1, wherein
2 the magnesium titanate oxide film contains 6 to 26% of titanium, 51 to 71% of oxygen and 1.8 to
3 32% of magnesium, as main ingredients.

- 1 4. (Previously Presented) The magnesium titanate implant as set forth in claim 1, wherein
2 the magnesium titanate oxide film has a bilayer structure including an upper porous layer and a lower
3 barrier layer.

- 1 5. (Previously Presented) The magnesium titanate implant as set forth in claim 1, wherein
2 the magnesium titanate oxide film has a thickness of 300 nm to 30 μ m.

1 6. (Currently Amended) The magnesium titanate implant as set forth in claim 5 1,
2 wherein the magnesium titanate oxide film has a thickness of 500 nm to 10 μ m.

1 7. (Original) A process for preparing a magnesium titanate oxide film implant, comprising:
2 irradiating UV light on an implant body made of titanium or a titanium alloy in distilled water
3 for more than 2 hours;
4 dipping the UV light-irradiated implant body in an electrolyte solution containing
5 magnesium; and
6 coating a magnesium titanate oxide film on the dipped implant body by anodic oxidation at
7 a voltage of 60 to 500V.

1 8. (Original) The process as set forth in claim 7, wherein the electrolyte solution is a single
2 or mixed solution containing magnesium.

1 9. (Previously Presented) The process as set forth in claim 7, wherein the electrolyte
2 solution has a concentration ranging from 0.01M to 1.0M.

1 10. (Previously Presented) The process as set forth in claim 7, wherein the electrolyte
2 solution has a pH of 3.0 to 12.5.

1 11. (Previously Presented) The process as set forth in claim 7, wherein the current density
2 for performing the anodic oxidation is within the range of 30 to 4000 mA/cm².

1 12. (Previously Presented) The process as set forth in claim 8, wherein the electrolyte
2 solution has a concentration ranging from 0.01M to 1.0M.

1 13. (Previously Presented) The process as set forth in claim 8, wherein the electrolyte
2 solution has a pH of 3.0 to 12.5.

1 14. (Previously Presented) The process as set forth in claim 8, wherein the current density
2 for performing the anodic oxidation is within the range of 30 to 4000 mA/cm².

1 15. (New) A process for preparing a magnesium titanate oxide film implant as set forth
2 in claim 1, comprising:

3 irradiating UV light on the implant body made of titanium or a titanium alloy in distilled
4 water for more than two hours;

5 dipping the UV light-irradiated implant body in an electrolyte solution containing
6 magnesium; and

7 coating a magnesium titanate oxide film on the dipped implant body by anodic oxidation at
8 a voltage of between 60V to 500V.

1 16. (New) A process for preparing a magnesium titanate oxide film implant as set forth
2 in claim 3, comprising:

3 irradiating UV light on the implant body made of titanium or a titanium alloy in distilled
4 water for more than two hours;

5 dipping the UV light-irradiated implant body in an electrolyte solution containing

6 magnesium; and

7 coating a magnesium titanate oxide film on the dipped implant body by anodic oxidation at
8 a voltage of between 60V to 500V.

1 17. (New) A process for preparing a magnesium titanate oxide film implant as set forth
2 in claim 4, comprising:

3 irradiating UV light on the implant body made of titanium or a titanium alloy in distilled
4 water for more than two hours;

5 dipping the UV light-irradiated implant body in an electrolyte solution containing
6 magnesium; and

7 coating a magnesium titanate oxide film on the dipped implant body by anodic oxidation at
8 a voltage of between 60V to 500V.

1 18. (New) A process for preparing a magnesium titanate oxide film implant as set forth
2 in claim 1, comprising:

3 irradiating UV light on the implant body made of titanium or a titanium alloy in distilled
4 water for more than two hours;

5 dipping the UV light-irradiated implant body in an electrolyte solution containing
6 magnesium, having a pH of between 3.0 to 12.5 and a concentration ranging between 0.01M to
7 1.0M; and

8 coating a magnesium titanate oxide film on the dipped implant body by anodic oxidation
9 within a range of between 30 mA/cm² and 4000 mA/cm², at a voltage of between 60V to 500V.

1 19. (New) A magnesium titanate oxide film implant as set forth in claim 1, comprised
2 of:

3 the implant body made of titanium or a titanium alloy being irradiating with UV light in
4 distilled water for more than two hours;

5 the UV light-irradiated implant body being dipped in an electrolyte solution containing
6 magnesium; and

7 the magnesium titanate oxide film being coated on the dipped implant body by anodic
8 oxidation at a voltage of between 60V to 500V.

1 20. (New) A magnesium titanate oxide film implant as set forth in claim 1, comprised
2 of:

3 the implant body made of titanium or a titanium alloy being irradiating with UV light in
4 distilled water for more than two hours;

5 the UV light-irradiated implant body being dipped in an electrolyte solution containing
6 magnesium, having a pH of between 3.0 to 12.5 and a concentration ranging between 0.01M to
7 1.0M; and

8 the magnesium titanate oxide film being coated on the dipped implant body by anodic
9 oxidation within a range of between 30 mA/cm² and 4000 mA/cm², at a voltage of between 60V
10 to 500V.